S. HRG. 104–35

INTELLIGENCE BRIEFING ON SMUGGLING OF NUCLEAR MATERIAL AND THE ROLE OF INTERNATIONAL CRIME ORGANIZATIONS, AND ON THE PROLIFERATION OF CRUISE AND BALLISTIC MISSILES

HEARING

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED FOURTH CONGRESS

FIRST SESSION

JANUARY 31, 1995

Printed for the use of the Committee on Armed Services

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INTELLIGENCE BRIEFING ON SMUGGLING OF NUCLEAR MATERIAL AND THE ROLE OF INTERNATIONAL CRIME ORGANIZATIONS, AND ON THE PROLIFERATION OF CRUISE AND BALLISTIC MISSILES

TUESDAY, JANUARY 31, 1995

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The committee met, pursuant to notice, at 9:35 am., in room SR–232A, Russell Senate Office Building, Senator John Warner presiding.

Committee members present: Senators Thurmond, Warner, Cohen, Coats, Santorum, Nunn, Exon, Levin, Glenn, Robb, and Lieberman.

Committee staff members present: Richard L. Reynard, staff director; George W. Lauffer, deputy staff director; Donald A. Deline, general counsel; Melinda M. Koutsoumpas, chief clerk; Cindy Pearson, security manager.

Professional staff members present: Romie L. Brownlee, Lucia M. Chavez, Joseph G. Pallone, and Eric H. Thoemmes.

Minority staff members present: Arnold L. Punaro, minority staff director; Andrew S. Effron, counsel; Richard D. DeBobes, counsel; Christine E. Cowart, special assistant; John W. Douglass and William E. Hoehn, Jr., professional staff members.

Staff assistants present: Menge Crawford, Shelley G. Lauffer, and Kathleen M. Paralusz.

Committee members' assistants present: Judith A. Ansley, assistant to Senator Warner; James M. Bodner, assistant to Senator Cohen; Samuel D. Adcock, assistant to Senator Lott; Richard F. Schwab, assistant to Senator Coats; Thomas L. Lankford, assistant to Senator Smith; Glen E. Tait, assistant to Senator Kempthorne; Andrew W. Johnson, assistant to Senator Exon; Richard W. Fieldhouse and David A. Lewis, assistants to Senator Levin; Edward McGaffigan, Jr., assistant to Senator Bingaman; C. Richard D'Amato and Lisa W. Tuite, assistants to Senator Byrd; Randall A. Schieber, assistant to Senator Bryan.

Additional witnesses present: Robert Hachey, Liaison Officer, Office of Congressional Affairs, Central Intelligence Agency; George Stevens, Senior Intelligence Officer, Non-Proliferation Branch, Defense Intelligence Agency; Daniel J. Spohn, Defense Intelligence Officer, Strategic Programs, R&D, and Proliferation, Defense Intel-

ligence Agency; and [deleted], Chief of Proliferation Group, Central Eurasia Division, Central Intelligence Agency.

Senator WARNER. I will ask the staff to indicate to the Chair that all persons in this room are cleared for this hearing. [Pause]

Who is representing the witnesses to certify their witnesses?

Are all persons in this room cleared for the hearing? Is that correct?

Mr. HACHEY. I am, and they are.

Senator WARNER. And your name, sir?

Mr. HACHEY. My name is Robert Hachey.

Senator WARNER. Thank you very much.

OPENING STATEMENT OF SENATOR JOHN WARNER, PRESIDING

Senator WARNER. The committee meets this morning to receive a classified briefing on nuclear smuggling and the role of international crime organizations in the proliferation of cruise and ballistic missiles.

The committee is very concerned about the possibility of nuclear materials being successfully smuggled out of the former Soviet Union into countries like Iran, countries that, for example, want to develop their own nuclear systems.

Additionally, based on last week's hearing on ballistic missile defenses, the Chairman wanted the members to have a clearer picture of the cruise missile and ballistic missile threat.

The Chair recognizes Dr. Gordon Oehler, Director of the Nonproliferation Center of the CIA, who will be briefing this committee on the smuggling issue, and Ms. Dee Bumbera, Senior Intelligence Officer for the Non-Proliferation Arms Control Division of the Defense Intelligence Agency.

You will handle the cruise and ballistic missile threat. Is that correct, Ms. Bumbera?

Ms. BUMBERA. Sir, I came with a trends briefing.

Senator WARNER. I beg your pardon? Could you speak up?

Ms. BUMBERA. Yes, sir. I came with a briefing that outlines the overall trends. But I also have a briefing on cruise missiles, if that is what you would prefer.

Senator WARNER. That is apparently what the Chairman, who prepared this statement, indicated.

Ms. BUMBERA. Okay.

Senator WARNER. But I suggest you just deal with both issues as best you can.

I would remind members and the staff that this briefing is classified Secret, and we have Ms. Cindy Pearson who will verify that all staff in this hearing are cleared.

Ms. PEARSON. That is correct, sir.

Senator WARNER. Thank you very much.

All right. We will proceed with you, Dr. Oehler.

STATEMENT OF DR. GORDON OEHLER, DIRECTOR, NONPROLIFERATION CENTER, CENTRAL INTELLIGENCE AGENCY

Dr. OEHLER. Thank you, Senator.

The demise of the Soviet Union has greatly reduced the strategic threat to U.S. security, but it has also weakened the control in

Moscow over nuclear materials and has greatly increased the potential for the proliferation of weapons of mass destruction, missiles, and related technologies from Russia and the other states of the former Soviet Union.

Senator WARNER. I will interrupt to ask Mr. Exon if he has any opening comments.

Senator EXON. I have no opening comments, Mr. Chairman. Thank you very much.

Senator WARNER. Thank you. Senator Cohen.

Senator COHEN. No, thank you.

Senator WARNER. Thank you.

Dr. OEHLER. I would like to begin my testimony making three points. First, examples of proliferation from Russia are depicted on the first chart in the books that you have before you. In the books, you will notice a tab marked "Summary," and then there is a title chart, "Nuclear Smuggling," and then there is the first chart. They are numbered down in the lower right. I will be following through with those chart numbers.

This chart shows what we have come to call "nuclear smuggling," which is simply another form of proliferation from Russia and the former Soviet Union. It includes a lot of different technologies—chemical, nuclear, missile, and so forth.

Many of the things that we are going to do to stop nuclear smuggling are the same things that we do to interdict other forms of proliferation.

Point number two is acute economic distress, widespread corruption, and a relaxation of the Soviet era controls will make nuclear proliferation a continuing problem for years to come. Thus we must take effective, long-term action to prevent a nuclear weapon or material from falling into the hands of a renegade state or terrorists.

Russia and the other states of the former Soviet Union are not the only sources of nuclear weapons or materials. The theft of approximately 130 barrels of enriched uranium waste from a storage facility in South Africa, which was reported in the press in August, demonstrates that this problem can begin in any state where there are nuclear materials, reactors, or fuel cycle facilities.

Senator WARNER. Is that particular case still unresolved as to what happened?

Dr. OEHLER. Yes. That's correct.

Continuing, you will see on Chart 2 that we find that the most worrisome of the proliferation of weapons is highly enriched uranium and plutonium. Those materials can be used directly to make nuclear weapons. But they are not the only materials that we see in nuclear smuggling incidents. All of the materials below the line, too, have been part of smuggling incidents.

Let me make a point about these non-weapons grade materials. Materials such as cesium-137, strontium-90, and cobalt-60 are not usable in weapons, but are examples of what we have seen in headlines along with the weapons usable material. [Deleted.

As Chart 3 shows, technically, the term "highly enriched uranium" refers to enrichment levels above 20 percent. However, a level about 90 percent is needed for weapons. We call this "weapons grade uranium."

As this chart also shows, there are non-weapons uses for uranium at all enrichment levels. This means that there is weapons usable material outside of the direct control of the military. The uranium purchased from Kazakhstan, for example, was in a civilian establishment, intended for use in Russian nuclear submarine reactors.

Unfortunately, there is a lot of weapons grade material available. Chart 4 depicts a rough assessment of Russia's stockpile. The United States has similar quantities, and there are, of course, other weapons states with smaller amounts.

Note the scale of the graphic—hundreds of tons. Chart 5 shows that the amount of material needed for a weapon is just a few kilograms. A few kilograms of nuclear material is easily concealed and transported, and there is no real health hazard from handling the plutonium ball for the amount of time required to cross a border or exit an airport.

In fact, there is a rather interesting story about Kurchatov, the father of the Russian atomic bomb, carrying the first pit of plutonium into the Kremlin and handing it to Stalin to show him what he had made and what was going to be used in Russia's first nuclear explosion.

There are some [deleted] warheads in the former Soviet Union. But the Russians have taken a number of steps over the last 2 years to increase security. For example, weapon storage sites are being consolidated from over 600 throughout the former U.S.S.R. in 1989 to approximately 100 in Russia today.

As Chart 6 shows, physical security of these sites is fairly sound. This site in Russia has multiple fences—you can see four fences—guard towers, and a well equipped guard force.

Chart 7 is a ground view. The guard towers and fences are not as good as ours, but we judge it unlikely that an outside force could break into the site, shoot the guards, and make off with a weapon.

But we do worry about an "inside job." [Deleted] accounting procedures are so inadequate that an officer with access could remove a warhead, [deleted].

Let me emphasize that we do not have any corroborating evidence on that particular point, but it is certainly very scary.

Nuclear materials themselves are more likely to be stolen than are warheads. As Chart 8 notes, Russia has more than 100 research facilities with sizable amounts of nuclear materials. Many have weapons usable material.

As the photo in Chart 9 shows, these research facilities have little physical protection—not much more than bars on the windows and a guard inside the door. One U.S. National Lab visitor characterized security at one such facility near Moscow as little more than "a babushka with a note pad."

Almost all seizures to date have been in Europe. The routes you see in Chart 10 have been the most popular.

Germany has been a frequent destination, partly because the suppliers expect to find wealthy buyers there [deleted].

To date, proliferators have been opportunists who first steal and then look to sell later. [Deleted]. But, in general, nuclear suppliers have not prearranged buyers.

Transit countries are beginning to adapt to the problem they are seeing. For example, some have increased security by placing radiation detectors at airports. This has helped deflect sellers elsewhere. You can be sure, though, that the sellers are going to look for weak spots where such radiation detectors are not available.

I believe a key gap in our collection and understanding of nuclear proliferation concerns what may be leaking to the south. Chart 11 shows southern routes that would give more direct routes to key proliferating states and some terrorist groups. We will be monitoring whether material begins to move in that direction. We do not see it yet. But, of course, we don't know what we don't see.

Senator COHEN. Am I correct, Doctor Oehler, that neither Italy nor, I think, Austria, has any restrictions against transporting nuclear materials into their countries?

Dr. OEHLER. There are international rules on the so-called fissile materials—uranium, enriched uranium, and plutonium. But for a lot of those other materials that were on that earlier chart, such as strontium and cobalt, there are no international controls.

Senator COHEN. I'm talking about Italy itself. I have been told that there were nuclear materials smuggled into Italy, arrests were made, and then the charges were dismissed because there was no law which prohibits possession of nuclear materials in Italy.

Dr. OEHLER. Certainly for nuclear materials broadly, that is the case. But I am sure that there are rules for highly enriched uranium.

A lot of the sales that are taking place are scams, and you will see shortly in the list that is in your Tab A that these are not of weapons significant fuels or elements. It is mostly those scams in not weapons usable materials that you see and that are not covered by local laws. In fact, this country has only recently upgraded some of its international laws to try to cover some of these so-called nonfissile materials in the same category as fissile materials.

Tab A, as I mentioned, chronicled some of the more disturbing nuclear smuggling events of last year. Nuclear trafficking scams have been plaguing us for years. But the incidents last year included increasingly larger amounts of nuclear materials and unprecedented seizures of weapons grade material for really the first time.

The trends are alarming. As I will note in a minute, although we have not seen it yet, we will continue to be concerned about the involvement of organized crime networks and perhaps terrorists will become more active in these areas as well.

The nuclear smuggling event last month in Prague, which is the first one on the list there, is the most serious to date. 2.7 kilograms of 87.7 percent enriched uranium was seized. That is enough to make a weapon, the enrichment level. The quantity, of course, is much lower than what you need for a weapon.

Nevertheless, this is the largest amount of weapons usable material seized yet.

Also, a seizure in August in Germany of some 350 grams of plutonium was a very significant seizure by the German Government and caused quite a ruckus between Russia and Germany, which led to much increased cooperation on nuclear smuggling between the two countries.

But as you can see from that list, there is an awful lot more of these, and this is just some of the more significant ones.

Switching to Russian organized crime, as you have no doubt heard, organized crime is a powerful and pervasive force today in Russia. But we know of no cases of organized criminal groups attempting to obtain nuclear materials or weapons grade nuclear materials, and we have looked hard. We continue to look.

The potential exists, however, and Russian authorities have announced arrests of alleged organized criminals associated with seizures of non-weapons grade materials. According to Russian officials, there are some 5,700 criminal groups in Russia. Many are small bands of petty criminals that would not meet Western definitions of organized crime. Nevertheless, we estimate that there are some 200 large, sophisticated criminal organizations that conduct extensive criminal operations throughout Russia and around the world. These major criminal organizations have established international smuggling networks that transport various types of commodities.

Many of these larger groups have connections to government officials that could provide them access to nuclear weapons or weapons grade materials and enhance their ability to transport them out of the country. In fact, press reports suggest there are vast networks, consisting of organized crime bosses, government officials, military personnel, intelligence and security service officers, as well as legitimate businesses. These networks would have the resources and the know-how to transport nuclear weapons and materials outside the former Soviet Union.

With regard to terrorist involvement in nuclear materials, again, we do not have any credible reporting that terrorist groups have acquired or are actively seeking to acquire nuclear weapons or materials. But threats continue to arise from individuals and organizations who claim access to such sources.

Constructing or acquiring and detonating a nuclear device that would create at least some nuclear yield would be a significant challenge for even sophisticated terrorist groups with international infrastructure and technical expertise.

I will get back a little bit to the statement earlier [deleted].

Traditional terrorist groups with established sponsors probably will remain hesitant to use such a weapon, that is, a nuclear weapon, for fear of provoking a worldwide crackdown and alienating their supporters.

In contrast, a new breed of multinational terrorists, exemplified by the Islamic extremists on trial today and those involved in the bombing of the World Trade Center, might be more likely to consider such a weapon if it were available. These groups are part of a loose association of politically committed, mixed nationality Islamic militants, apparently motivated by revenge, religious fervor, and a general hatred for the West, whom they accuse of corrupting Islam.

[Deleted].

Before turning to the next session, let me conclude with a few words on what the intelligence community, including what my center, the Non-Proliferation Center, is doing to try to combat nuclear proliferation.

As you recall, the Non-Proliferation Center is a community center under the Director of Central Intelligence. It involves all agencies of the intelligence community designed to better coordinate the intelligence community and focus it on nonproliferation problems in general.

The intelligence community has produced a number of assessments of nuclear proliferation material security in [deleted].

We recognized that U.S. efforts supporting nuclear materials security in the former Soviet Union were focused only on weapons dismantlement and storage sites, and, therefore, we encouraged the expansion of these efforts to encompass the nuclear research institutes I discussed earlier. The DCI's Arms Control Intelligence Staff has agreed to assume intelligence support for this responsibility.

[Deleted.]

The intelligence community and the FBI participate in NSC and Department of State chaired inter-agency working groups dealing with nuclear proliferation. The Non-Proliferation Center facilities direct cooperation between the FBI and the CIA to further support U.S. law enforcement matters in this area.

The Non-Proliferation Center has reviewed the collection guidance on nuclear nonproliferation and brought the issue before the National Intelligence Collection Board. [Deleted.]

That concludes my remarks. We have here representatives from the Department of Energy, the FBI, DIA, and, of course, CIA with me today. So after the next presentation on cruise missiles and ballistic missiles, we would be happy to answer your questions.

Senator WARNER. Thank you very much.

I will now turn to Ms. Bumbera. Since we have been joined by several other members, why don't you state exactly what you propose to do in your opening briefing.

STATEMENT OF DEE BUMBERA, SENIOR INTELLIGENCE OFFICER, NON-PROLIFERATION ARMS CONTROL DIVISION, DEFENSE INTELLIGENCE AGENCY, ACCOMPANIED BY GEORGE STEVENS, SENIOR INTELLIGENCE OFFICER, NON-PROLIFERATION BRANCH, DEFENSE INTELLIGENCE AGENCY

Ms. BUMBERA. Yes, and thank you, sir. As you have seen, I have been shuffling slides to accommodate your request. I came prepared to present a very broad overview of global military trends that would have covered advanced conventional weapons and weapons of mass destruction, primarily centering on trends growing in the Far East and Mideast regions. But I think what I will do, since your interest appears to be the cruise missile threat and the ballistic missile threat, is to go straight into the details of cruise missile threat, and then I will follow with ballistic missile threat.

If we have time, I can pick back up the general trends that we have. Particularly, I would like to show you the arms market outlook if we have time.

Senator WARNER. I think it is important that you do both.

Ms. BUMBERA. Okay. Thank you.

AERODYNAMIC MISSILE SYSTEMS AS WEAPONS OF MASS DESTRUCTION

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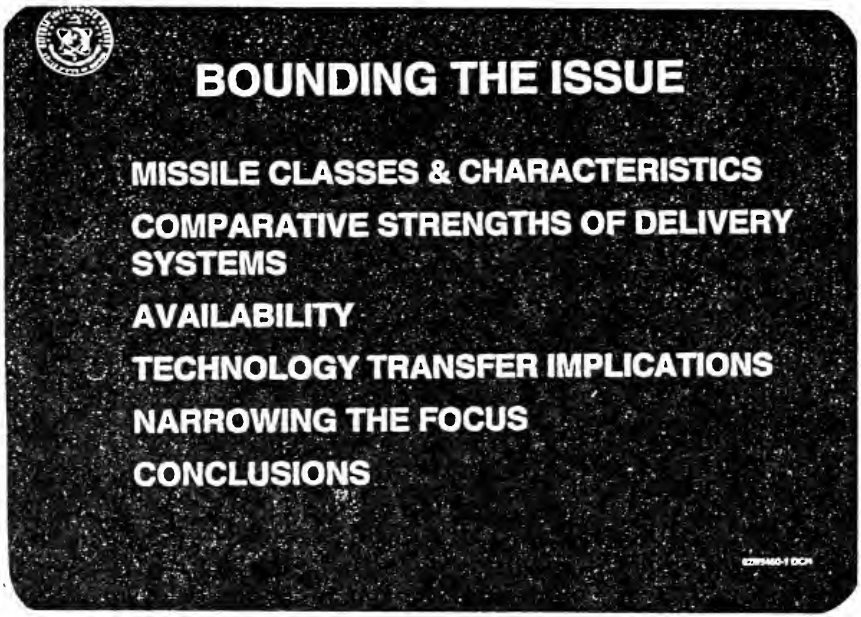
We use the term "aerodynamic missile systems" in lieu of cruise missiles because there is a variety of different types of cruise missiles out there and it is a misnomer to call them all "cruise missiles."



This briefing talks about a very large, complex problem, and in order to try to bound it, what we are trying to do is talk about various missile classes and characteristics, the comparative strengths of various delivery systems in terms of their utility for delivering weapons of mass destruction, their foreign availability and wide availability around the world, some of the technology transfer implications of this proliferation problem, and then we will look at trying to narrow the focus.

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DEFINITIONS

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These are simply the definitions so that we are all on the same sheet of music.

The basic difference between a cruise missile and the TASM is the distinction in the guidance system. A TASM is a tactical air-to-surface missile that follows either a cruise profile or a ballistic profile. A UAV is generally pilotless and used oftentimes more for surveillance and those kinds of things and other kinds of aerial surveillance missions, generally non-lethal missions. But, again, there are scenarios where one could envision converting a UAV for the use of coupling it with either a CW or a BW warhead.

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Senator WARNER. Is there any reason for no incremental improvement in this immediate period?
Ms. BUMBERA. [Deleted.]
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Ms. BUMBERA. [Deleted.]
Senator WARNER. The Chairman is here. Good morning, Mr. Chairman.
Chairman THURMOND. Good morning. You just go right ahead and continue as you have, Senator Warner.
Senator WARNER. Please continue Ms. Bumbera.
Ms. BUMBERA. [Deleted.]
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Chairman THURMOND. Do you want to pick up with the next witness?
Senator WARNER. Actually, Senator, she has a second briefing that she is going to give now.
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Ms. BUMBERA. [Deleted.]
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Mr. STEVENS. [Deleted.]
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Ms. BUMBERA. [Deleted.] Sir, do I have any time left?

Senator WARNER. The question is about time, Mr. Chairman.

Perhaps you should acquaint the Chair with what you could do in such time as the Chair may rule that you have left.

Ms. BUMBERA. Okay. The briefing I brought we put together for talks about the lessons learned from the Gulf war and how that

has driven the motivations and intentions for acquiring weapons of mass destruction programs.

I also then brought a look at the arms market and how that is playing with the acquisition of conventional weapons worldwide. It takes about 20 minutes to do. I could very quickly, since I have done the missile programs, go through it. If I could, I would like to give you the arms market portion because I think you will find that very interesting.

Senator WARNER. I would suggest we get that portion of it, Mr. Chairman, and then turn to questions. Given the schedules of members, we can get the next part of the briefing a little later.

Chairman THURMOND. I had to open the Senate this morning and asked Senator Warner to chair this briefing.

You just go ahead and I will ask questions after the next witness.

Just go ahead, Senator Warner.

But I would like to get your opinion on which countries you feel can come near to jeopardizing the United States and with what type weapons.

Ms. BUMBERA. Sir, did I understand the question to be which countries are most threatening to the United States?

Chairman THURMOND. That's correct, and with what type weapons.

Ms. BUMBERA. Okay.

Chairman THURMOND. Are they nuclear, biological, chemical missiles?

Ms. BUMBERA. [Deleted.]

Chairman THURMOND. How would you rate these countries: Russia, Iran, Iraq, North Korea? In what order would you feel they are the most threatening to this Nation? Also Syria.

Ms. BUMBERA. I would rather defer that to Dr. Oehler, who has considerably more expertise than I do and who can speak for the community.

Dr. OEHLER. Thank you. I think they represent very different threats. It makes it a little hard.

The [deleted] nuclear weapons still in Russia with the instability in Russia and the possibility of leakage of material probably is still the biggest problem.

The biggest political problem today, in the immediate term, is North Korea and what they might be doing. It is not just the fact that they are developing ballistic missiles and nuclear weapons. [Deleted].

That is probably the strongest near-term direct military threat.

I think in the long run many people look at Iran as being the major threat.

[Deleted.]

Chairman THURMOND. Do you have any record of the number of countries that have obtained nuclear material from Russia?

Dr. OEHLER. We do not have any record other than the transfer of weapons under Soviet control, of course, in former Soviet Union states. We do not have any record of them transferring fissile materials in any quantity to any other state.

They have transferred some nuclear weapons related technologies in the last couple of years, particularly to China.

Chairman THURMOND. All right. Now I believe you want to go into another briefing, don't you?

Ms. BUMBERA. Very quickly, sir.

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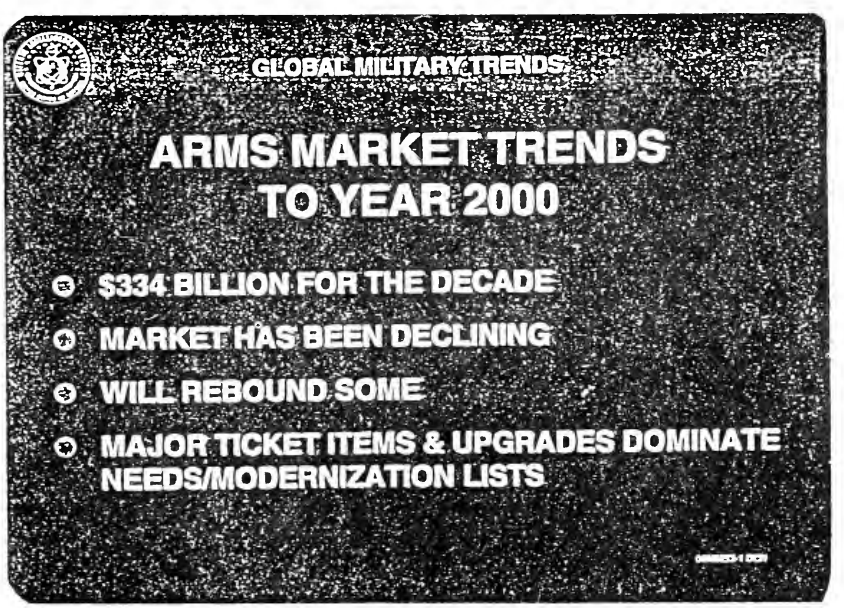
As far as technology being the key to whether a country is pursuing a conventional or nonconventional program, with the demise of COCOM, with the free availability of technical assistance on the market, with the pressures to sell, with newly industrialized countries pursuing technology and the level of technology, dual use especially, coming up around the world, with the fact that the war provided one of the greatest arms sales shows on earth, we are seeing more technology moving around the world, being used at levels that are sufficient to build these weapon systems. We are also seeing less and less controls on dual use but military-relevant technology, making it tough for us to get a handle on where it is all going, who is getting it, and what they are doing with it.

Again, I alluded to various transfer mechanisms. These are the transfer mechanisms that have always played a role, and they are still playing a role. Again, technical exchanges and technical expertise seem to be key to most of the programs in the Far East and the Mideast.



Looking at the arms market, I think when you look at weapons of mass destruction trends, you cannot neglect the conventional market that is still out there. Countries are still pursuing improving their conventional capabilities. For the decade 1991–2000, the arms market is something on the order of $334 billion. The market actually has been declining since the war, but we expect it to pick up by the end of the decade. What will happen is major ticket items, such as tanks, fighters, and the like, as well as upgrades for those fighters, will dominate the market.

Looking at the Middle East, there has actually been a moderate decline in spending for arms in that region. Threat perceptions are driving acquisitions. You can see that it is about $76 billion, half of which is under contract to date, and all of the major ticket items are needed.

[Viewgraph deleted.]

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In Southeast Asia, we are actually seeing an increase in spending on arms. It is because there is a thriving economy, allowing for upgrades and modernization. It is something on the order of $20 billion, half of which is currently under contract. The primary focus, as you would imagine, is aircraft, and that is to extend their reach capabilities within the region.

In North Asia, we are talking about a very robust, increasing arms market. We are talking about moneys available to acquire weapons. Rivalry perceptions are fueling these purchases as well as a desire for self-sufficiency and a requirement to extend reach in the region. The market is something on the order of $46 billion, with roughly two-thirds under contract, and all of the big ticket items, naval, aircraft, and air defense, make up this market.

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That concludes the briefing that I had for you this morning.

Senator WARNER. Mr. Chairman, I think you wish to inform the members of the committee that the Chair and presumably the ranking member desire to start a hearing at 10:45 on a nomination now pending before the committee. It would be my intention to remain here to continue to chair this hearing and, thereby, allow those members in attendance to ask such questions as they desire.

So I will lead off with brief questions and then will defer to the other side.

First, Dr. Oehler, I draw this question from an observation made the other day by our distinguished colleague from Indiana, Mr. Coats. We concentrate on governments that have this capability and so forth, but let's talk about the world of terrorism.

In this briefing, you described how this material is moving, primarily from the former Soviet Union, into eager and waiting hands. Could you translate what is the terrorist threat of their acquiring some of this material, and how large a group of experts is needed to take some of this material and fashion it into weapons, no matter how crude, that could be utilized by terrorists for any number of reasons?

Dr. OEHLER. Yes. [Deleted.] We are watching that very closely.

But the answer really is that if they do get materials—and we are talking about materials to make a bomb, now, not just a radiological mess——

Senator WARNER. Well, you had a briefing book which had a chart containing a black ball the size of a Coke can. You said it was easily transportable.

Dr. OEHLER. Yes, easily transportable.

Senator WARNER. Suppose someone got one of those. Then how many others are required to come in technically fashioned into some type of weapon? Could they bring it into the United States?

Dr. OEHLER. It would take quite a technical cadre to do it. The bigger concern of having just the plutonium itself would be if someone were to be able to steal a weapon and then try to use that weapon, try to detonate that weapon. But even that is very difficult and is certainly compounded by the permissive action links and other precautions that countries like the United States and Russia have put on these devices.

So if the terrorist state acquires the nuclear materials, which are what is more readily available today, it would still be quite a technical challenge to turn that into a weapon.

Senator WARNER. What is the likelihood in the famous scenario of the suitcase bomb?

Dr. OEHLER. The suitcase bomb, even though we had that many years ago, you will recall that we got to that only after we did a lot of nuclear testing of larger devices. It takes much higher technology development to make a small yield something-or-other that could go off, say the size of a suitcase, and have a very small yield. It takes much higher technology to do that than to take something like the size of that plutonium ball that I showed you before and make that go off.

Senator WARNER. How about non-fissionable material, i.e., the biological and chemical?

Dr. OEHLER. [Deleted] if you look at why BW was turned away by our generals back in the 1960s, it's because the results are really unpredictable in many ways.

[Deleted.]

Senator WARNER. Now, Ms. Bumbera, in your area, could terrorists conceivably get some type of cruise missile and put it on a simple transport ship and move it toward the United States to pose a threat?

Ms. BUMBERA. [Deleted.]

Senator WARNER. Senator Nunn.

Senator NUNN. Mr. Chairman, I just came in. I will reserve my time until after other Senators who arrived earlier have had a round.

Senator WARNER. Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

I want to thank both of you for an excellent presentation. I think it brings home very directly what I have been concerned about for a long time.

As we continue to build up our military forces in the United States and be concerned about our readiness, we must recognize and realize that we are, of course, spending a great deal of money. It seems to me that other countries, and especially terrorist organizations, who don't have that kind of money, may indeed be attracted to the BW and CW types of operation.

Put yourself in other people's shoes. If you were worried about undue influence by the United States of America and its allies, it seems to me that you would never be able to afford to match us in basic military strength from the traditional standpoint. But it seems to me what you are hitting on here today, and I thank you for alerting us to it, is a short-cut process, either by terrorists, which is the worst of all worlds, or by Third World countries who may want to build up their muscle, including some of our allies, who we know have some weapons of mass destruction that we think would be used for defensive purposes, and I think justifiably.

But I still say I think this whole area that you are alerting us to this morning, will help maybe open the eyes of as many as to what the real threat is.

Let me back up for just a moment to digress, if I can, Mr. Chairman.

I am serving on a commission that will perform an overview of our entire intelligence services. This commission is going to make a report sometime next year to all of the relevant committees. I

would just ask at the present time, since you people are involved in this, since we have the DIA, CIA, FBI, Energy Department and others here, are there any particular do's and don'ts which you in the intelligence community would advise us on with regard to the evaluation of all these agencies that we are going to perform?

For just a moment, if you could, give us any concerns that you have from within the intelligence agencies as to the mission of this very important commission.

Dr. OEHLER. Well, I will give you my personal view on this.

I have been watching the proliferation business. I used to work the Soviet Union problem, and I will say, in all seriousness, that the problems with which we are dealing today are much harder for us to deal with than the Soviet Union's problem. Let me give you an example.

Soviet military, like our military, operates according to very standard procedures in that we could learn how they worked, how they developed weapons over a long period of time, and make good, accurate predictions. Even though it was a big threat, we could work that because of the inertia of that whole problem.

In the proliferation area, you cannot really generalize because you have so many different countries. You have Libya which, as stated, is not coupled well into proliferators in Europe and is not doing well on many of their programs. There is Iran and Iraq, which have small, very skilled, technical cadres internally and good connections into Europe and elsewhere for getting external assistance. North Korea's is very different and is indigenous, but low tech. Israel's is indigenous and very high tech.

We have to look at every one of these countries independently and try to establish the same kinds of links and knowledge that we have against the one, big target before. So, again, the proliferation problem you cannot generalize.

I would just like to emphasize that if we are going to try to follow these proliferation accounts, we have to have some form of significant intelligence capability.

I strongly support you and others looking at what duplication there is in the community and, with the exception of some small areas, I think you will find that there is not too much.

Senator EXON. Do you have anything to add to that?

Ms. BUMBERA. [Deleted.]

Senator EXON. Mr. Chairman, my time is up. I just want to add this comment.

I intend to be here for a second round because this is a very important matter and I would like to get into your views on Dr. Mikhailov, the head man in Russia on these matters, with whom I have met frequently. We have discussed all of these things. I would like to get your feelings on his reliability in this area.

Mr. Chairman, the President announced the other day that for the first time in history kids are going to bed without nuclear weapons pointed at them, I take some relief from that. But, frankly, I am as much concerned as ever, if not more so, with this threat that we are talking about here today.

Sometimes I long for the days of yesteryear, when all we had to worry about was the Soviet Union.

Senator WARNER. Senator, excuse me. We are just about over the line here on time. Are you about finished?

Senator EXON. I haven't taken any more than my time, I don't think, Mr. Chairman.

Senator WARNER. Sorry. It was indicated to me that you had completed your time.

Senator EXON. I said this was for the second round.

Senator WARNER. Oh, fine.

Chairman Thurmond, do you wish to ask a question?

Chairman THURMOND. I will yield my time to others who have not had a chance to ask questions yet.

Senator WARNER. Then Senator Coats is next.

Senator COATS. Thank you, Mr. Chairman.

The briefing book which you handed out under Tab A lists a chronology of recent nuclear smuggling interdictions. I believe it has just the last 6 months. But we have 4 pages of interdictions in the last 6 months.

Some time ago, I spent some time with the Customs Service and others involved in the anti-drug effort in South Florida. We had a massive interdiction effort there. But the best effort I could get on the success of that interdiction was a range of between 5 percent and 10 percent. In other words, we were interdicting 5 to 10 percent of the drugs being smuggled into South Florida, and this was the area where we had the most intense interdiction efforts, coordination between various Federal and State agencies.

What in your estimate is the percentage of interdictions of total attempted smuggling or deliveries? Do you have a ballpark figure that you can give us?

Dr. OEHLER. No, I sure do not. But let me give you some other numbers.

What we have here is a selection of what we consider the significant ones that we know about. But there are a lot of others.

I have a press release from Germany dated the 25th which says that by however methodology they count, a total of 267 cases of illegal nuclear traffic were recorded in Germany in 1994.

Now I am sure a lot of that is mishandling of nuclear materials for medical purposes and all of that. But, nevertheless, I think what we are seeing has been a real mushrooming of actual cases.

One of the reasons why this goes back only 6 months is that many of the more significant activities really started only in roughly May of last year.

Senator COATS. Do you see a very significant acceleration?

Dr. OEHLER. Yes. It is hard to say how much of that is because of an increase in traffic and how much of it is because of an increase in surveillance by the countries.

[Deleted.]

Senator COATS. It is fair to conclude that this only represents a percentage of what activities actually take place?

Dr. OEHLER. I'm sure there's a lot that we don't know about.

[Deleted.]

What we see in the case of Iran, for example, is wariness, extreme wariness, about being taken again by some of these nuclear scams, [deleted].

Senator COATS. Would it be fair to conclude that the genie is so out of the bottle that we ought to begin seriously considering shifting our major efforts from counter proliferation to some attempt to establish, and I'm not sure what the right term would be, some efforts at deterrence. Protecting against threats, which would involve a lot of increased human intelligence activities, strike teams, and efforts to ward off known threats?

Dr. OEHLER. I'm not willing to say the genie is out of the bottle yet. Again, most of what we have seen have been non-fissile, nonweapons use materials, and even those that have been weapons use material, interestingly enough, we don't believe any of that has come from the Russian weapons program. It has been from the institutes, research labs, and those sorts of things.

Now as the Kasakhstani case showed, some of them can have rather significant amounts. But it is nothing like a significant leakage of material from the nuclear weapons stockpile, which has hundreds of tons of material.

Senator COATS. But, as you both indicated, if you want to wreak havoc or make a very significant statement, you don't have to have a sophisticated nuclear weapon. You used the term "radioactive mess."

Dr. OEHLER. Yes.

Senator COATS. You can create a radioactive mess fairly easily?

Dr. OEHLER. Yes, compared to a nuclear bomb. Yes.

Senator COATS. This is my last question.

You have a diagram in the book of a Coke can with the core, and then next to it is, I assume, a soccer ball.

Dr. OEHLER. Yes.

Senator COATS. What does that represent?

Dr. OEHLER. It's just to show the relative size. That's all.

Senator COATS. The size. What would be the mess you could create with a plutonium core the size of a Coke can as compared to the number of messes you would create, with fissionable material, chemical weapons, or biological weapons? In other words, if I wanted to do something such as make a statement against the United States, and I wanted to do something in New York City, what would this Coke can do and what could I do short of this?

Dr. OEHLER. Well, if that were part of a nuclear weapon, then that could yield something on the order of 20 kilotons of explosive. Now when I say part of a weapon, there is more to a nuclear weapon than just the fissile material. That is just the hardest part to get.

Now I don't have to tell you what a 20 kiloton nuclear weapon would do in New York City. [Deleted.]

Senator COATS. What size area?

Dr. OEHLER. [Deleted.]

Senator COATS. Human delivery, brief case delivery.

Dr. OEHLER. [Deleted.]

Senator COATS. Thank you.

Senator WARNER. We will now go to Senator Levin.

That was a very important line of questions.

Senator LEVIN. Thank you.

You indicated that the material, the weapons usable material, has not yet been captured, caught, except for that last Prague arrest. Is that accurate?

Dr. OEHLER. Well, the type of material is weapons usable. What I meant in answer to the last question is we don't even believe that came from the nuclear weapons lab.

Senator LEVIN. Where do we believe that 2.7 kilograms came from?

Dr. OEHLER. We don't know.

Senator LEVIN. But when you say we don't believe it came from a lab, why is that?

Dr. OEHLER. Because nuclear weapons establishments have a higher percentage of enrichment. We know a fair amount about the Soviet nuclear weapons programs [deleted].

Senator LEVIN. So we know it did not come from a weapon.

Dr. OEHLER. We don't believe it came from a weapons program.

Senator LEVIN. All right. When you say a lab, isn't a lab part of a weapons program?

Dr. OEHLER. No. There are a lot of research laboratories—for example, in propulsion in submarines.

Senator LEVIN. Okay. Let me just keep running through my questions.

In terms of a weapons program, we don't believe there has been any leakage from the Russian weapons program per se, is that correct?

Dr. OEHLER. The things we have seen here can better be explained by coming from other areas.

Senator LEVIN. All right. Nonetheless, I believe we want to assist Russia in keeping it that way?

Dr. OEHLER. Oh, you bet.

Senator LEVIN. Has there been a request for funds to help them move weapons from Kazakhstan to Russia that is pending for funds under Nunn-Lugar?

Dr. OEHLER. I don't know how the Nunn-Lugar funds are spent. But I know that they are focused on dismantlement, destruction, accountability.

Senator EXON. There has been a request, Senator. You know that and I know that. Or I thought you would.

Senator LEVIN. Well, I had heard there was a request.

Dr. OEHLER. My difficulty is in terms of nuclear material accountability in our building. That is handled by another group. I don't know the details of that as well as I should.

Senator LEVIN. Have there been any trials or convictions resulting from nuclear smuggling cases? You can let us know for the record. It seems to me that this is pretty important.

We have all these people being arrested. Has anyone been tried and convicted?

Dr. OEHLER. I know there have been a lot of arrests. I know that people are in jail. This has been a fairly recent phenomenon. I don't know that the trials have been concluded.

Senator LEVIN. If you could, let us know what is happening in terms of trials and convictions. If we are serious and if other countries are serious about it, presumably there should be serious consequences.

[The information follows:]

A survey of press items indicates at least seven cases in which individuals have been convicted or sentenced for trafficking in nuclear materials.

In Russia:

In a case stemming from November 1993, three Russians eventually were tracked down and confessed to stealing a truckload of nuclear fuel rods. A Navy lieutenant colonel was freed with a suspended sentence, but two accomplices, one a senior lieutenant in charge of a nuclear reactor, were sentenced to 3 years in a labor camp.

A Russian press review of a number of nuclear trafficking incidents noted that at Chelyabinsk-70 three naval officers, staffers of the Institute of Nuclear Physics, were convicted of stealing 4.5 kg of uranium.

In another incident at Chelyabinsk-70, two men and a woman were convicted in November 1994 of stealing 5 kg of uranium. All three were given conditional sentences because the damage they had done was fully reimbursed.

A Moscow television program reviewed theft of radioactive elements, stating that a number of incidents were under investigation. The program noted that several people had been convicted in various incidents, the last in 1992.

Elsewhere in Europe:

A February 16, 1995 press item reported that the Essen Land Court sentenced a Pole to 2½ years imprisonment for trading in radioactive uranium. The case stemmed from a September 1994 incident in a highway parking lot in Recklinghausen, Germany, in which the Pole tried to sell 70 uranium rods to a potential customer from Essen.

According to a November 1994 German press review of nuclear incidents, a British citizen who procured nuclear materials from Bulgaria was arrested in Hamburg in 1992 and sentenced to 2 years probation. The same German press review mentions that at least 102 persons are known as merchants of death; some have been arrested but only a few sentenced.

A press report datelined Berlin, June 15, 1993, stated that two Austrians and a Pole were jailed for terms of 1 year to 18 months for trying to sell smuggled uranium, cesium, and plutonium. This was part of a sting operation.

Senator LEVIN. I am pronouncing your name right, Ms. Bumbera?

Ms. BUMBERA. Yes, sir.

Senator LEVIN. On North Korea, is the Taepo Dong I and II missile program based on SCUD missile technology?

Mr. STEVENS. [Deleted.]

Senator LEVIN. That's good enough. Thanks. Has North Korea tested either one of these missiles?

Mr. STEVENS. [Deleted.]

Senator LEVIN. You said it was bolted to a frame. Explain that, please.

Mr. STEVENS. I am not a ballistic missiles engineer, but a rocket is fired by itself in a test of thrust and you need a frame to hold it. It is not a test of the whole assembled missile. It is just the engine compartment of that.

Senator LEVIN. All right. And that has not been tested on a range, for example?

Mr. STEVENS. No, it's a static firing in place.

Senator LEVIN. Do we know what the range of those two missiles are, the I and the II?

Mr. STEVENS. [Deleted.]

Senator LEVIN. What nations do we believe could currently target the United States with ballistic missiles?

Mr. STEVENS. [Deleted.]

Senator LEVIN. Which is the most likely to do so in the next 10 years or shortly thereafter?

Mr. STEVENS. [Deleted.]

Senator LEVIN. Thank you.

Senator WARNER. We will now, pursuant to the questions of the Chairman and the ranking member, recess this hearing for such period as required to proceed with the nomination that is pending before this committee.

Upon our return, Senator Santorum, it will be your turn for questions.

[Whereupon, at 11:04 a.m., the committee recessed, to proceed with other business.]

[Whereupon, at 11:52, the committee resumed its briefing.]

Chairman THURMOND [presiding]. The committee will come to order.

I just have a couple of questions and then I'm going to turn this hearing back over to Senator Warner who started it this morning.

Dr. Oehler, is the intelligence community aware of any nuclear weapons grade material being smuggled out of the Soviet Union into any Middle Eastern countries, such as Iran or even to Turkey?

Dr. OEHLER. Nuclear weapons grade material, no. We are not aware of any.

I do want to say on any of these that we do not feel really confident with our knowledge in this area because there is a lot we don't know.

Chairman THURMOND. In November, 1994, over 1,300 pounds of highly enriched uranium was secretly airlifted out of Kazakhstan to the United States because the administration feared the nuclear weapons grade material would fall into the wrong hands, possibly into countries like Iran or Iraq.

Is the intelligence community aware of any nuclear weapons grade material being stolen from this facility prior to the United States operation removing it? If so, where do you believe the material is now located?

Dr. OEHLER. Let me just check with [deleted] for just a minute. [Pause.]

Chairman THURMOND. He can make a statement if he wants to.

Dr. OEHLER. In the material accountability at that facility, there were 8 kilograms of material missing. That 8 kilograms was apparently reactor grade material, not weapons grade material. [Deleted.]

Chairman THURMOND. Dr. Oehler, this is my last question before I leave.

In December 1994, over 6 pounds of highly enriched uranium was seized from a parked vehicle in Prague. A New York Times article reported that United States intelligence officials were unsure of the origin of the smugglers, unsure of the origin of the nuclear material, and unsure of who the customers were.

Has the intelligence community learned more about where the smugglers came from, where the material originated, or, equally important, who were the customers?

Dr. OEHLER. We don't know as much as we would like to. This matter is being handled by the Czechs and there are even disputes inside the Czech Republic on the security services and how this is being managed.

The material, as you say, was located in the trunk of a car, in two cylindrical containers. Police arrested three men, a Czech nu-

clear engineer who, reportedly, had not been officially employed by the nuclear industry for several years, and two citizens of the former Soviet Union, one of whom is Russian, although press reports say that the two were from Belarus and Tajikistan.

The Czech citizen apparently was the leader of the group. He had been trained in the former Soviet Union and, thus, had personal ties to the Russians. The other two reportedly were businessmen in financial trouble apparently trying to recoup some business losses.

We don't have any information on who the ultimate buyer was. We are not sure that an ultimate buyer had been lined up for that yet.

In answer to the other question, we are not sure where that came from. We have not had access to the material itself. But the 87.7 percent enriched U–235 again leads us to believe it was not from the weapons program but probably from some of the material that was located in other research institutes, research and production institutes.

Chairman THURMOND. Thank you.

Senator Warner, would you kindly take over.

Senator WARNER [presiding]. Yes. Thank you.

Senator Nunn, I don't know that you have had an opportunity to ask your questions and Senator Glenn likewise has not had a turn.

Senator NUNN. Why doesn't Senator Glenn go first and then I will follow him.

Senator WARNER. Senator Glenn.

Senator GLENN. Thank you very much. China has pledged to adhere to the MTCR, Missile Technology Control Regime. Does intelligence indicate that they are still continuing their assistance to Pakistan regarding the M–11? And what are they doing with Iran? Are they doing things that we would see as being in violation of MTCR?

Dr. OEHLER. They have some activities that we bring forward to those who make those judgments. The Chinese have modified their behavior in a number of proliferation areas, but they have a couple of country exceptions. You mentioned the two—Iran and Pakistan.

[Deleted.]

Senator GLENN. How about Pakistan?

Dr. OEHLER. In Pakistan, with the M–11, there are still visits and that program is continuing. Yes. Let me just mention that India and Pakistan both are close to the point of deploying ballistic missiles, India with the Prithvi, which is in final R&D. It is this government's effort to try to prevent the deployment at this point, acknowledging that both countries have missiles, nuclear capable missiles.

Senator GLENN. In any of these regimes, is anyone thinking of warheads that would be non-nuclear—in other words, CW, BW, and so on? Do we have any indication of that?

Dr. OEHLER. Yes. We have seen some countries say they might be willing to sell CW. In terms of conventional, [deleted].

Senator GLENN. That would be available, supposedly, to Pakistan or to Iran?

Dr. OEHLER. Yes.

Senator GLENN. Okay. This goes to a slightly different area. Japan has, I think the current figure out of the 30 year agreement we have, where we let them reprocess and bring it back, I think they have something like, we estimate, 106 tons of plutonium in stock in Japan. Is that correct?

Dr. OEHLER. I'm not familiar with the number but I know it's a lot.

Senator GLENN. It's a lot and it's a 30 year agreement without any say that we have over it whatsoever, which I think was one of the craziest agreements we ever made, myself. Anyway, regardless of that, how much information do we have on that? Are we given access to where that is stored?

The reason I bring this up is this is the largest single source of plutonium, I believe, outside the Soviet Union and the United States.

Dr. OEHLER. That material is certainly under IAEA safeguards. They know where that is.

Senator GLENN. It is? It is under complete IAEA?

Dr. OEHLER. Yes. Sure.

I would imagine that we, the intelligence community, know where it is. I myself do not.

Senator GLENN. Okay. There is one other question that I think might come under today's hearing.

What information do we have about Iraq's efforts to reverse engineer the Tomahawk cruise missile? I understand they picked up a couple that did not reach target over there and that there was indication they were trying to reverse engineer and get the Tomahawk guidance and so on. Do we know anything about that?

Dr. OEHLER. That is my understanding as well, that they recovered a couple of missiles intact. [Deleted.]

Senator GLENN. Do we know anything about how successful they are at reverse engineering that?

Dr. OEHLER. No, I do not.

Senator GLENN. Do you?

Ms. BUMBERA. [Deleted.]

Senator GLENN. I have just one other. You may have covered this earlier. I was told that you had covered part of it, at least.

I have been not so much concerned about ICBMs as I am concerned, more concerned, about low level cruise missiles and, in particular, countries that may be coming along well enough in their technology that they can make the briefcase or the suitcase size bomb. That takes a high level of sophistication to do that.

When we reach that point or when other nations reach that point, which they will, eventually, then it seems to me our threat is not as likely over the Pole or through ICBMs as it is through clandestine suitcase size things being set off wherever.

What nations, besides ourselves and the Soviet Union, have the sophistication to develop weapons of this small size?

Dr. OEHLER. I don't know that these other two countries have done it, but I would imagine that the U.K. and France have the capability. [Deleted.]

Senator GLENN. Okay. But not China or other nations we would consider outside our bloc of friends?

Dr. OEHLER. No. Those required for us a lot of testing before we could find out how to do that, and we anticipate that is several steps down the road, even for countries like Pakistan.

Senator GLENN. Thank you. My time is up.

Senator WARNER. Senator, I pursued a similar line of questioning this morning. Let me see if I can summarize the question and the answer that I carried with me from your testimony, Dr. Oehler.

It is that you feel in the foreseeable future, there is not a great deal of threat in terms of terrorist use, as opposed to a country's decision to use weapons that are in the category which you have been outlining in your testimony this morning, is that correct?

Dr. OEHLER. Nuclear weapons. We worry about this a lot.

Unless security breaks down in Russia very dramatically and there is a hemorrhage of materials, I think and I think the community believes that the probability of a terrorist group acquiring that and being able to detonate that to give a significant nuclear yield is fairly small in the near-term.

Senator WARNER. Senator, he brought in another category of weapons, namely that of anthrax, BW, BW being the generic, and maybe to some extent chemical. He pointed out that we are highly vulnerable to that type of terrorist use. Am I correct in that?

Dr. OEHLER. Yes.

Ms. BUMBERA. [Nods affirmatively.]

Dr. OEHLER. [Deleted.]

Senator GLENN. [Deleted.]

Senator WARNER. [Deleted.]

Senator GLENN. [Deleted.]

Dr. OEHLER. Uh-huh.

Senator GLENN. Is this a possibility? Is anyone looking into that? If we looked into us doing it, for instance, then supposedly somebody else might be looking into it, too.

Dr. OEHLER. It might be easier to use materials other than plutonium, which sometimes is hard to get. But [deleted] area is quite possible.

There was a case a number of years ago, I don't remember the details, of a very small contamination of one of the water supplies to New York City. There was nothing to worry about.

Senator WARNER. Was it intentional there?

Dr. OEHLER. It was an intentional contamination. Torrey, do you remember the details of that?

Mr. FROSCHER. No, I don't.

Dr. OEHLER. I would be happy to get back to you with the details. This was not a terrorist act, as such. The point is that it could be, and even if it is not of sufficient level to pose significant radiological damage, you can imagine the panic it would have in the public.

[The information follows:]

On April 1, 1985 (April Fool's Day), the Mayor of New York City received a letter from an anonymous source threatening to introduce plutonium trichloride into the water supply of New York City unless all charges against subway vigilante Bernhard Goetz were dropped by April 11 at 1700 hours.

In the period prior to April 11, New York City water was tested for gross radioactivity every 4 hours. No sign of danger was detected. Tests made in prior years indicated plutonium levels of 0.1 to 0.6 femtocuries per liter.

A test on April 17, 1985 showed levels of plutonium of 21 femtocuries per liter in a single sample. A femtocurie is one millionth of one billionth of a curie. Federal guidelines list 5,000 femtocuries per liter as the maximum level of plutonium safe for drinking water.

The April 17 tests could not determine whether the substance had been in a trichioride compound, but did rule out nuclear power plants and atmospheric nuclear weapons tests as possible sources. Press reports said that scientific experts could not speculate on how the plutonium had entered the water supply. They did not rule out the possibility that it had been deliberately put into the water, nor did they rule out any other cause—including the possibility that the containers used to hold the water samples were contaminated with plutonium.

Senator GLENN. One reason I was thinking of this was we talked about the possibility that people were buying plutonium in Europe in tiny amounts, not enough to put a bomb together. To put a bomb together, they would need a lot more and a big, sophisticated factory, testing, facet design, and all of the things we know have to go into a bomb design. But somebody with some plutonium, a little amount of it, can come over and spread some of that stuff around Times Square, or in the World Trade Building through the ventilation system or something like that, and we will have an enormous problem. And that can be done with a tiny amount of plutonium.

Dr. OEHLER. Or any of the other radiological materials.

There are a lot of those that are distributed. If you look at the list in Tab A, a lot of those nuclear smuggling events really involve those kinds of materials.

Senator GLENN. Thank you.

Senator WARNER. My time is up.

Senator GLENN. Thank you, John. I didn't mean to take so much of your time.

Senator WARNER. No. That line is important, John. Senator Nunn.

Senator NUNN. Let me just ask a few procedural, but I think important, questions. What is your relationship with the FBI in working these issues? I ask both of you this question.

Dr. OEHLER. Well, we are a community organization. We do not have an FBI person in our staff yet, but we have been working on it [deleted]. We work with them as part of the Community Nonproliferation Committee. They are a member of that. Paul Dembnicki of the FBI is a member of our video conference and is involved or is at least invited to all the meetings that we have as community meetings. He is here today.

Senator NUNN. What is the stream of information flow? How quickly does the FBI get any of the information that you have on proliferation developments? Is that something that happens every day, or is it something that happens once a week, once a month? How does the information flow from CIA to FBI, from DIA to FBI, and also vice versa?

Dr. OEHLER. I would not say that it is every day, but it is probably once or twice a week if you consider the broad range of weapons of mass destruction.

[Deleted.]

Senator NUNN. What was that the sale of?

Dr. OEHLER. Ammonium perchlorate, which is an ingredient in solid fuel ballistic missiles.

Senator NUNN. What happened to that shipment?

Dr. OEHLER. The shipment was seized and the material was seized.

Senator NUNN. Where?

Dr. OEHLER. It was seized in Saudi Arabia.

Senator NUNN. How about DIA?

Ms. BUMBERA. [Deleted.]

Senator NUNN. How often is the information that you may have given to the FBI and how often do you get information from them? Is that daily, weekly, or monthly?

Ms. BUMBERA. [Deleted.]

Senator NUNN. Are you satisfied with the flow of information you get from the FBI?

Ms. BUMBERA. [Deleted.]

Senator NUNN. That's what I'm talking about.

Dr. Oehler, how about you?

Dr. OEHLER. We are trying to enhance that by having an FBI person in the center. So that is an indication that we think there is more to do.

Senator NUNN. What about cooperation with Russian intelligence on this subject? Do you cooperate with Russian intelligence above the board, behind the scenes? What is the deal?

Dr. OEHLER. [Deleted.]

Mr. SPOHN. [Deleted.]

Senator NUNN. Is there a reason for it within the intelligence community that this situation is cooling or is it, rather, the overall state of relations?

Mr. SPOHN. [Deleted.]

Senator NUNN. What about with Czechoslovakian intelligence, the others, Hungarian, Polish? What about the other intelligence agencies? Are we working with them in a meaningful way or is it just beginning? Where are we there?

Mr. SPOHN. [Deleted.]

Senator NUNN. My time has expired. I have one other question.

Senator WARNER. I will yield to you part of my time. Go ahead.

Senator NUNN. I just want to ask one final question on this.

In your dealings with the Russians, even though the relationship has cooled, did you get the impression that they, themselves, independently of us, are working these issues or are they nonchalant about it? What is their degree of concern?

Dr. OEHLER. I think they are very concerned about it because a lot of the materials in a lot of the areas are much closer to Russia than they are to the United States.

They have run their own operations. They have produced their own intelligence reports. They have even published, I think, some of the best unclassified intelligence reports on the status of proliferation.

Let me, if I could, just take another minute of your time and ask [deleted] who handles our relations with them, to maybe outline very quickly what he knows of what they are doing.

[Deleted.] Senator Nunn, with the Russians the problem is in some cases that, as these countries move toward democracy, there is an increasing amount of bureaucratic competition that takes place. So the FSK, which is the internal service responsible for nu-

clear security, is not always as cooperative with some of the other elements of the government as they should be.

Also, while they admit the problem is beginning to grow, they do not see it as having the same level of significance as we do. Therefore, as you may recall, this resulted in their disagreement with the Germans last summer, when the Germans were indeed suggesting that the problems they were having were a direct result of the Russian inability to control the materials.

They don't look at the problem the same way we do, Senator Nunn, and I am afraid they are moving away slowly but surely. In all honesty, though, some of their efforts have been turned aside for the moment because the same people who are responsible for nuclear security are also very involved in the Chechen situation. Therefore, over the last 7 or 8 weeks their attention has been directed elsewhere.

In Eastern Europe, sir, [deleted]. They are in a range of conflict over who is responsible. Also, as they compete for their own budgets, there have been times when it has been difficult to sort out exactly who has the right story. [Deleted.]

Senator NUNN. Director Freeh made a trip over there and called on each one of his counterparts in Russia, as well as the East European countries, last year.

Since that trip took place, have you seen any difference in attitude with the intelligence or police organizations over there?

[DELETED.] I think, sir, that that visit contributed to an overall U.S. Government effort to make these people, these countries, more sensitive. I think that, in total, all of those things have worked to the advantage of the U.S. Government.

I should say, too, Senator, that in this particular area of nuclear smuggling, U.S. Government policy is really quite clear as they see it overseas. So it has not been difficult for them to understand what it is we want them to do. The problem stems, in many cases, from their ability to respond both quickly and effectively.

Senator NUNN. Thank you.

Thank you, Mr. Chairman.

Senator WARNER. Will the distinguished ranking member desire another round of questions?

Senator NUNN. No.

Senator WARNER. We have Senator Exon. What about you, sir?

Senator EXON. I have a couple of questions I would like to ask, Mr. Chairman.

Senator WARNER. Senator Exon.

Senator EXON. Thank you both for being here today. I think you have helped us a great deal in trying to define the most likely or most devastating threat that we have.

We have to separate these a little bit because it seems to me that deterrence, obviously, has little meaning to terrorists, but it is a viable threat for India, North Korea, and some of those other countries.

It seems to me that those countries, knowing of our awesome power, that we could have one or two Trident submarines sitting off their shores, they would know we could devastate their country if they ever unleashed anything.

But this threat that you are talking about primarily here is a very real one. It seems to me that we had better take a very close look at such a threat.

I would like to ask you, since you said 33 nations, more or less, are involved in this type of activity in one way or another a bit more about these countries and their operations. We don't know how many terrorist organizations are involved, obviously.

Dr. Mikhailov is a tremendously interesting and important figure in the former Soviet Union on all of this. Every time I have talked to him about this, which has been on three or four occasions, he has been very up front, very forceful of the fact that he has control of their nuclear devices, and he says none of this leakage of fissile material is coming out of his facility.

You seemed to substantiate that in your testimony today. [Deleted.]

Dr. OEHLER. [Deleted.]

Senator EXON. I could not agree with you more. As a [deleted].

Dr. OEHLER. [Deleted.] What was the last part of your question?

Senator EXON. My last question was do you agree that there has not been leakage, as he asserts, out of what weapons he controls?

Dr. OEHLER. Of the weapons facilities, yes, to the best of our knowledge. And what we have seen in the diversions that took place so far, we believe they have not been from the weapons facilities.

Senator EXON. What about scientists?

Dr. OEHLER. Scientists is a little different story. They have had a lot of nuclear related cooperation agreements with countries such as Libya for years. We don't believe that those really involve much in weapons areas. [Deleted.]

We have seen the transfer of materials—[deleted] and a number of other things—that clearly give us great concern about what the Chinese are learning from the Russian nuclear weapons program.

Senator EXON. And the same could be said about Iran now?

Dr. OEHLER. Well, Iran does not have the same nuclear cadre. We don't know, really, but we don't think there has probably been anywhere near the same level of association.

Now, understand that Iran is trying to build its program in a couple of different ways. Most of those civilian technologies that they have gotten from China are in terms of mining and metals processing for uranium.

The Iranians have been negotiating with the Russians for reactors that possibly could produce plutonium [deleted].

Senator EXON. My last question, Mr. Chairman, has to do with the overall situation.

I also take it from your testimony today that you have no convincing evidence nor any hint that a nuclear device has been transferred to any other country from the Soviet Union—I mean nuclear pits or the like—is that right?

Dr. OEHLER. That's right.

Senator EXON. But that does not mean that we should not be concerned about the smuggling of this material——

Dr. OEHLER. Oh, absolutely.

Senator EXON [continuing]. Whether it is weapons grade or not because it could, over a period of time, give that capability to countries that do not have it now.

Dr. OEHLER. And we worry, too, that we just don't know enough information and that, perhaps, a weapon or so has leaked. We worry about that. But I am not saying that it has happened.

Senator EXON. But you have seen no evidence of it? Do you see any evidence that they have gotten materials and have altered their program because of that?

Dr. OEHLER. We have seen no evidence of it. And we have looked not just at these sorts of interdiction efforts that we are talking about but also at what do you see in Iran, what do you see in Iraq.

Senator EXON. I would just say that your definition with regard to biological types of weapons such as anthrax is as a very immediate, possible threat, which I worry could be used at any time. Thank you, Mr. Chairman.

Senator COATS [presiding]. Senator Nunn.

Senator NUNN. I just want to ask one final question. In your judgment, how much more difficult has your job become as a result of the ending of COCOM export controls? What is your evaluation of the effectiveness of the post-COCOM system thus far?

That question is for either one or both of our witnesses.

Ms. BUMBERA. [Deleted.]

Senator NUNN. If we were to expand NATO and take in, say, Poland, Hungary, Czechoslovakia, or any of the three, would that cause difficulty in terms of technology leakage, if we starting having technological sharing with them? Are those countries able to control their own technologies now?

Ms. BUMBERA. [Deleted.]

Senator NUNN. Thank you.

Senator COATS. Thank you, Senator Nunn.

Let me just ask a couple of questions to wrap up the hearing.

First of all, thank you both for testimony before us today.

Dr. Oehler, I am pleased to have someone from Rensselaer representing your organization so well. I appreciate the Hoosier perspective on all that.

I want to go back to the questioning I was involved in earlier. I do not mean to imply that our counterproliferation efforts should be diminished in any way. They may need to be augmented. By the same token, I am becoming increasingly pessimistic over our ability to effectively control the spread of nuclear, biological, or chemical weapons production or their delivery.

For this reason, I feel that we need to make sure that we have in place the best counter we possibly can. I guess, then, my question is what are your thoughts regarding assets we need to have in place and efforts we need to make in the future so that we can make sure we have adequate monitoring and intelligence of the potential use of that threat, and the ability to counter that potential use? Could each of you comment on that?

Dr. OEHLER. Sure. We agree that this is a growing problem. I think someone, perhaps Charles Krauthammer, had an article in the paper a while back which said that the long-term prognosis for these proliferation areas is good; that these international control regimes, such as the IAEA, are starting to have more effect, and

he goes on with that and about the concern that the civilized world has about these programs. But he says we have to get through the short-term to get to the long-term, and that looks like it will give us some really difficult times.

[Deleted.]

We also see a lot more attention on the part of the government on putting together contingency plans for use of these. That is another area that we have kind of ignored, just as we had ignored civil defense, for the most part, during the nuclear age with Russia.

So there are a number of steps that are taking place, I think, because people are recognizing the real danger and the probability of this happening.

Senator COATS. Do you have the resources? You said almost frantic activity. Do you have the resources to put in place what you feel you need?

Dr. OEHLER. We are gearing up the resources. We can always use more, and we are working with our program managers to get it. It is not just dollars. You have to have the right people to put on the job, too. We are trying our best in that area.

Senator COATS. Ms. Bumbera, do you have a comment on that?

Ms. BUMBERA. [Deleted.]

Beyond that, within the community, we are all reliant on the sort of multiplier effect of solid data bases and ADP tools, and the advent of Intel Link, to be able to talk to one another around the community and share information on a much faster basis.

[Deleted.]

Again, as I mentioned earlier, one of our key concerns is to be able to provide that information in a usable form and a releasable form. That is one of our goals, recognizing that that is the key to interdiction and stopping those kinds of networks.

Senator COATS. How would you grade the cooperation we are receiving from other nations that share our concerns and share our interest in this?

Dr. OEHLER. On proliferation in general? It varies.

Senator COATS. In intelligence sharing?

Dr. OEHLER. [Deleted.]

Senator COATS. Are there any weak links in that?

Dr. OEHLER. Oh, yes.

Senator COATS. Of serious concern?

Dr. OEHLER. [Deleted] a lot of these emerging democracies are really fighting amongst themselves and they are not very well coordinated.

[Deleted.]

So this shows the kind of struggle of these emerging nations and it is probably going to be a while before they have anything that is a coherent service that can provide the kind of support and information-sharing we would like.

Ms. BUMBERA. [Deleted.]

Senator COATS. You mentioned the growing threat in Asia. Where are the Japanese in all of this in terms of what we have just been discussing? What has been the extent of their involvement, effort, and cooperation with us?

Dr. OEHLER. [Deleted.]

Senator COATS. Ms. Bumbera?

Ms. BUMBERA. I would have to defer to Mr. Spohn on that one.

Mr. SPOHN. [Deleted.]

Senator COATS. I guess it falls to me to drop the gavel here.

Dr. OEHLER. Can I make one footnote?

Senator COATS. Of course.

Dr. OEHLER. I was handed a note by my Department of Energy colleagues here that I referred earlier to a possible contamination of the New York City water supply that did not amount to much. It was in the early 1980s, and it was a disgruntled citizen who tried to extort money. The DOE's Nuclear Emergency Support Team did deploy some personnel to check the reservoirs around New York city. There was never a radiological threat, in fact. But the news, of course, was big news at the time.

Senator COATS. It is fair to say that it would be easy to engage in that kind of threat?

Dr. OEHLER. Uh-huh. [Deleted.]

Senator COATS. This is a fascinating subject. I want to thank both of you for your testimony. On behalf of Senator Thurmond, Senator Nunn, and the entire committee, we appreciate this very much.

I am sorry for the interruption and I thank you for staying with us.

This hearing is now adjourned.

[Whereupon, at 12:40 p.m., the committee adjourned.]

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